Amendments to the Specification:

On Page 1, before first paragraph, insert a new paragraph as follows:

This application is a divisional of US Patent Application No. 09,142,530, filed January 20, 1999, which is a Section 371 national phase of PCT/US97/03873 filed March 12, 1997, and claims the benefit of US provisional application 60/013,270 filed March 12, 1996.

On Page 9, please amend the paragraph spanning lines 3-15 to read as follows:

In the first step, a serine residue was introduced at amino acid 31 as described in Schweitzer et., *J. Biol. Chem.* 264: 20786-20795 (1989) which is incorporated herein by reference. The single-stranded DNA template for the mutagenesis reaction was prepared by cloning the full length wild-type human DHFR cDNA, encoding Seq. ID no. 7, (from plasmid pHD80 obtained from Dr. G. Attardi, California Institute of Technology) in M13mpl 8. Site-directed mutagenesis was carried out using the Oligonucleotide-directed *In Vitro* Mutagenesis System by Amersham. Phosphorylation of the mutagenic oligonucleotide, annealing of the oligonucleotide with the DNA template, extension of the oligonucleotide with the Klenow fragment of DNA Polymerase I with α-thio-dCTP in place of dCTP, filtering of the reaction mixture to remove single-stranded DNA, nicking the non-mutant strand with the restriction enzyme NcoI (which cannot digest phosphorothioate DNA), removal of the nicked strand with exonuclease III, and repolymerization with E coli DNA polymerase I were all carried out in accordance with the instructions of the manufacturer to produce S31 mutant DHFR.

On Page 11 please amend the paragraph spanning lines 24-31 to read as follows:

To confirm the effectiveness of mutant DHFR in accordance with the invention to confer resistance to antifolate ~~toxicty~~ toxicity, *in vivo* experiments were conducted in mice using the PHE22/Ser 31 (F/S) DHFR mutant. Bone marrow cells harvested from 5-fluorouracil treated donor mice were concultured with virus producing AM12cells producting SFG-F/S-Neo or SFG-Neo as a control for 24 hours. These cells were transplanted into both irradiated and nonirradiated recipients ($2X10^6$ and $2X10^7$ cells per recipient). Bone marrow transplant recipients were challenged with a single dose of 300 mg/kg MTX during each of weeks 4 and 6 post transplant, and with a single dose

of 600 mg/kg MTX during each of weeks 6 and 7 post transplant. The recipients were monitored for survival, white blood cell counts, platelet counts, reticulocyte counts and drug resistant CFU-GM colonies. The observations indicated that recipient mice were protected from high dose MTX toxicity, while control animals could not tolerate high MTX doses. Further, it was observed that mDHFR cDNA tranduced marrow cells are engrafted in both irradiated and nonirradiated recipients.